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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,644	05/03/2001	Harold R. Kaufman	353-07	7230

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EXAMINER

HARPER, HOLLY R

ART UNIT PAPER NUMBER

2879

DATE MAILED: 06/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,644

Applicant(s)

KAUFMAN ET AL.

Examiner

Holly R. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "increase the area of said surface by approximately one-half" is considered indefinite. It is unclear how the increase in area can be measured because there is no previous amount or measurement with which to compare.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshida (USPN 4,846,953).

In regard to claim 1 and 6, the Yoshida reference discloses an ion source with a discharge region (Figure 1, Element 2), a cathode (Figure 1, Element 3), an anode (Figure 1, Element 4), and a means for supplying a flow of ionizable gas (Figure 1, Element 1). The anode surface is contoured (Figure 1, Element 4).

6. Claims 2 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaufman (USPN 5,763,989).

The Kaufman reference discloses an ion source with a discharge region (Column 13, Lines 38-39) containing an anode at one end (Figure 11, Element 96) and an electron-emitting cathode near the other end (Figure 11, Element 42). A magnetic field is in the discharge region between the anode and cathode (Column 1, Lines 45-46). Ionizable gas enters the anode through a flow-passage (Column 5, Lines 49-50 and Figure 11, Element 46). There are one or more apertures in the discharge region (Figure 11). Electrons flow from cathode to anode and the ions that do not recombine with electrons on surfaces of the anode and the magnetic poles and are accelerated outward by the electric field to form an energetic ion beam (Column 7, Lines 45-55). The anode is contoured so that one-third or more of the surface cannot be reached by straight lines originating from a given point exterior of the ion source (Figure 11, Element 96).

7. Claims 3 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaufman (USPN 5,763,989).

The Kaufman reference discloses an ion source with a discharge region (Column 13, Lines 38-39) containing an anode at one end (Column 13, Line 40) and an electron-emitting cathode near the other end (Column 13, Line 43). There are one or more apertures in the discharge region (Figure 11). Ionizable gas enters the anode through a flow-passage (Column 5, Lines 49-50 and Figure 11, element 46). Electrons flow from cathode to anode and the ions that do not recombine with electrons on surfaces of the anode and the magnetic poles and are accelerated outward by the electric field to form an energetic ion beam (Column 7, Lines 45-55). The anode is contoured so that one-third or more of the surface cannot be reached by straight lines originating from a given point exterior of the ion source (Figure 11, Element 96).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman (USPN 5,763,989).

In regard to claim 1, the Kaufman reference discloses an ion source with a discharge region (Column 13, Lines 38-39) containing an anode at one end (Column 13, Line 40) and an electron-emitting cathode near the other end (Column 13, Line 43). The anode is contoured so that the area of the surface is increased. A magnetic field is in the discharge region between the

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anode and cathode (Column 1, Lines 45-46). Ionizable gas enters the anode through a flow-passage (Column 5, Lines 49-50 and Figure 11, element 46). Electrons flow from cathode to anode and the ions that do not recombine with electrons on surfaces of the anode and the magnetic poles and are accelerated outward by the electric field to form an energetic ion beam (Column 7, Lines 45-55).

In regard to claim 5, the Kaufman reference doesn't specifically disclose a baffle means configured so that more than one-third or more of the area of the anode cannot be reached by straight lines originating from a given point exterior of the ion source. The Kaufman reference does disclose an anode with two distinct pieces. They are electrically isolated and one could serve as a baffle means. It is in position to create a small aperture that would not allow more than one-third or more of the area of the anode to be reached by straight lines originating from a given point exterior of the ion source (Figure 12, element 102B). This will help protect the anode from contamination. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use part of the composite anode as a baffle means to protect the anode from contamination.

10. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaufman (USPN 5,763,989).

The Kaufman reference discloses an ion source with a discharge region (Column 13, Lines 38-39) containing an anode at one end (Column 13, Line 40) and an electron-emitting cathode near the other end (Column 13, Line 43). A magnetic field is in the discharge region between the anode and cathode (Column 1, Lines 45-46). Ionizable gas enters the anode through a flow-passage (Column 5, Lines 49-50 and Figure 11, element 46). Electrons flow from

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cathode to anode and the ions that do not recombine with electrons on surfaces of the anode and the magnetic poles and are accelerated outward by the electric field to form an energetic ion beam (Column 7, Lines 45-55). The Kaufman reference doesn't specifically disclose a baffle means configured so that more than one-third or more of the area of the anode cannot be reached by straight lines originating from a given point exterior of the ion source. The Kaufman reference does disclose an anode with two distinct pieces. They are electrically isolated and one could serve as a baffle means. It is in position to create a small aperture that would not allow more than one-third or more of the area of the anode to be reached by straight lines originating from a given point exterior of the ion source (Figure 12, element 102B). This will help protect the anode from contamination. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use part of the composite anode as a baffle means to protect the anode from contamination.

Response to Arguments

11. Applicant's arguments filed 2/3/2003 have been fully considered but they are not persuasive.

Regarding applicants claim that Kaufman does not disclose an electrically isolated baffle, the Examiner respectfully disagrees. The Kaufman reference discloses that a variation can be made in the design where the power supply can be made to only magnetically permeable insert the A part of the anode, with the B part (the baffle) being permitted to electrically float (Column 13, Lines 15-25). If the two anode pieces can be at different potentials, it is believed that they are electrically isolated.

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As allowable subject matter has been withdrawn, this action is made non-final.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Holly Harper whose telephone number is (703) 305-7908. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Holly Harper
Patent Examiner
Art Unit 2879



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